



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Where Patent Application of: )  
KAMAT )  
Serial No. 10/780,423 ) Examiner: D. Le  
Filing Date: February 17, 2004 )  
Confirmation No. 2010 )  
For: SYSTEM AND METHOD FOR ) Art Unit: 2683  
NOTIFYING USERS OF AN EVENT )  
USING ALERTS )

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DECLARATION UNDER 37 C.F.R. §1.131

Mail Stop Amendment  
Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

Sir:

I, **HARSHAD N. KAMAT**, do hereby declare:

1. I am the inventor of the subject matter of the above-identified patent application.

2. I conceived of the subject matter of the above-identified patent application while working in our research and development laboratories in the United States at TeamOn Systems, Inc. in Issaquah, Washington prior to June 13, 2003, the effective date of U.S. Patent Publication No. 2005/0027742 to Eichstaedt et al. (hereinafter "Eichstaedt"). I conceived the invention that is described and claimed in the above-identified patent application and worked diligently on developing the claimed invention from

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the time of conception to a reduction to practice at a date before June 13, 2003.

3. I conceived and reduced to practice a system and method for notifying a user of an event in which an alert engine module receives an alert in a Simple Mail Transfer Protocol (SMTP) indicative of a notification for an event corresponding to a stored message on a server, and transforms the alert one time from the SMTP into a communications format that is preferred by a user. The alert is delivered to a target address preferred by a user. The alert can be transformed based on a header and/or format of the target address. The alert can also be delivered to an appropriate gateway for the communications format. This alert could be delivered to a mobile device in a communications format based on the type of mobile device. This communications format could also be a Short Messaging Service (SMS) message, which could be a default message.

4. I had reduced the invention to practice by developing appropriate software and testing the software prior to the effective date of Eichstaedt as noted in the email shown in Exhibits 1 and 3. Exhibit 1 on page 2 sets forth that I ran simple tests using the T-Mobile SMSC to test throughput. Page 1 sets forth a throughput delivery of about 54,000 messages in one hour and the use of SMTP servers corresponding, of course, to the Simple Mail Transfer Protocol (SMTP). Mobile phones had been used. The

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different alerts as noted in the bottom of page 1 were indicated as sent previously to MX servers. These emails are dated March 13 and 14, 2003, before the effective date of Eichstaedt.

5. Page 2 of Exhibit 2 shows revision 1.1 and is directed to results from querying a CVS repository for a specific file, i.e., alert engine.java. Other files would, of course, make up the alert engine, but this particular file is the main entry point into the alert engine module. Revision 1.1 states that the initial cut for the alert engine would replace SMTP as a preferred delivery agent and also support SMPP and PAP.

6. Page 1 of Exhibit 3 sets forth that a test was run with T-Mobile in which 21K alerts were sent at 300 MSISDNS. The 21K would refer to the alert of a small size as compared to a large message. The alert could be indicative of a notification for an event corresponding to a stored message on a server. I had used a software component termed by me as an alert engine module with the server, because alerts were being transferred. These emails are dated March 22, 2003.

7. I continued to work diligently with further testing and development of the software until filing of this patent application identified above. In September 2003, I had drafted an Invention Disclosure Form (Exhibit 4) initially listing as a joint inventor, Shaibal Roy. After

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further discussions among us and the patent attorney, I was correctly determined to be the sole inventor of the claimed invention. The Invention Disclosure Form sets forth in detail a block diagram illustrating various components of the apparatus/system and method and some written description of the invention that had been reduced to practice.

8. I hereby declare that all statements made herein are of my own knowledge and are true and all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title XVIII of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

01/19/2006  
Date

AKamat  
Harshad N. KAMAT

Fwd RE RE TMobile SMSC Accessible

----- Forwarded Message -----

> From: "Netu, Sorin" <Sorin.Netu@T-Mobile.com>  
> To: 'Harshad Kamat' <harshad@TeamOn.com>  
> Cc: Shaibal Roy <shaibal@teamon.com>; Steve McCarthy <sjm@teamon.com>;  
> Taylor Clark <taylor@teamon.com>; Michael Zakharoff <zak@TeamOn.com>;  
> David Hanson <davidh@teamon.com>; Aaron Roberts <aaron@teamon.com>  
> Subject: RE: RE: TMobile SMSC Accessible  
> Date: Fri, 14 Mar 2003 08:49:44 -0800  
>  
>  
> I see. I will ask the lab SMSC admin to make sure the configuration is  
> what I requested. I was not aware they only allow 1 connection. They  
> were supposed to allow 2.  
> Also I will ask them if they have any procedures for testing the  
> throughput of such an application.  
>  
> The throughput I have asked for is to have 15 SMSs/sec. This  
> translates to 54000 messages in 1 hour. Did you do any analysis on  
> the current situation (SMTP servers) to see what you would need to  
> send all messages with no problem? Let me know if 15 msg/sec is not  
> enough and we can change. All connections now on the SMSC allow up to  
> 10 msg/sec and we have larger apps than yours in there. Our alerts  
> system from Infospace sends more than 5 million messages per month and 10 msg/sec  
are enough. So, please let me know if your forecast exceeds mine.  
>  
> One (short term) way to get around this SIM/SMS storage problem is to  
> send class 0 SMS which is only displayed on the phone instead of class  
> 2 which are stored in the SIM card. Another way would be to set the  
> bit in the header to overwrite the messages (I think this only works  
> if the message content is the same as previous). Try these and in the meantime I  
will work with engineering to see what else we can do.  
>  
> I hope this helps. Thank you  
>  
> Sorin

> -----Original Message-----

> From: Harshad Kamat [mailto:harshad@TeamOn.com]  
> Sent: Friday, March 14, 2003 8:33 AM  
> To: Netu, Sorin  
> Cc: Shaibal Roy; Steve McCarthy; Taylor Clark; Michael Zakharoff;  
> David Hanson; Aaron Roberts  
> Subject: Re: RE: TMobile SMSC Accessible  
>  
>

> ----- Original Message -----

> > From: "Netu, Sorin" <Sorin.Netu@T-Mobile.com> I am not sure I  
> > understand what you mean by "any ideas on how to test its  
> > throughput  
> > without sending a whole lot of mails". The lab SMSC does not have a  
> > large  
> > throughput  
> > and is only meant for testing the functionality. Can you please clarify?  
>  
> Today, we deliver alerts to four MX servers at your end. Previously,  
> you had only two, boca and tofu, and they could not keep up with all  
> the alert traffic. Hence, it would be a good idea to test whether a  
> single SMSC would be able to handle all the traffic before going live with it.  
>  
> Secondly, I was under the impression that the lab SMSC is very similar  
> to the production SMSC.  
>  
> I wanted to test the throughput without sending a lot of mails, say

Fwd RE RE TMobile SMSC Accessible

> 10000 messages, because it we don't have as many SIM cards, each phone  
> has enough memory to take about 30 messages and once delivered it is  
> hard to delete them one by one.  
>  
> Hope that answers your question.  
>  
> In an earlier mail, you said  
> >3)TeamOn is going to have a input/output\_window =15  
> >Maxsession=2  
> >Multiple\_Address=yes  
>  
> I find that the lab SMSC allows me only one connection at a time. The  
> production SMSC will allow me two connections, could you please ask  
> the administrator to allow TeamOn two connections on the lab SMSC so  
> that I can test in a "production like" environment.  
>  
> Thanks,  
> Harshad  
>  
>  
> > -----Original Message-----  
> > From: Harshad Kamat [mailto:harshad@TeamOn.com]  
> > Sent: Thursday, March 13, 2003 6:27 PM  
> > To: Shaibal Roy; David Hanson; Netu, Sorin  
> > Cc: Taylor Clark; Steve McCarthy; Aaron Roberts; Michael Zakharoff  
> > Subject: TMobile SMSC Accessible  
> >  
> >  
> > The TMobile SMSC is now accessible to me and I ran some simple tests  
> > against it.  
> >  
> > I need to test its throughput.  
> >  
> > Sorin, any ideas on how to test its throughput without sending a  
> > whole lot of mails. We have very few SIM cards and it is a pain to  
> > delete all those messages if you don't have "Delete All" on your phone.  
> >  
> > By the way, I need all the SIMs and phones I can lay my hands on  
> > tomorrow to run these tests. So, Sorin -- please return our phones  
> > at the earliest  
> > :- ) and Aaron -- allocate all the phones to me when they come in.  
> >  
> >  
> > -  
> > Harshad N Kamat  
> > TeamOn Systems  
> > 425-369-5751  
> >  
> >  
>

## cvsllog

RCS file: /var/cvsroot/123/agg/com/teamon/apps/alerts/AlertEngine.java,v

Working file: AlertEngine.java

head: 1.15

branch:

locks: strict

access list:

keyword substitution: kv

total revisions: 24; selected revisions: 24

description:

-----  
revision 1.15

date: 2004/12/01 02:19:39; author: blair; state: Exp; lines: +5 -5

BugId: 0 Removed unreferenced local and private members and methods.

-----  
revision 1.14

date: 2004/08/27 23:47:09; author: harshad; state: Exp; lines: +36 -9

Commenting out use of AlertThreadGroup and falling back to old code where in we kept a count of active threads.

The threadgroup was not getting the correct count, the active count was always much higher.

BugId:SDR34822

-----  
revision 1.13

date: 2004/08/25 23:08:48; author: harshad; state: Exp; lines: +21 -5

BugId:SDR34822

-----  
revision 1.12

date: 2004/08/03 22:13:22; author: harshad; state: Exp; lines: +12 -31

Adding AlertEngineThreadGroup to keep count of active threads and to see if there are any uncaught exceptions

BugId:0

-----  
revision 1.11

date: 2004/06/25 00:50:42; author: dave; state: Exp; lines: +5 -6

BugId: 000 - Removing unused imports.

-----  
revision 1.10

date: 2004/05/06 20:55:09; author: harshad; state: Exp; lines: +1 -10

Removing all traces of bwc/bda code from alert engine.

BugId:0

-----  
revision 1.9

date: 2004/04/07 18:24:03; author: harshad; state: Exp; lines: +6 -2

BugId:0

-----  
revision 1.8

date: 2004/02/06 21:36:21; author: harshad; state: Exp; lines: +5 -3

branches: 1.8.2;

BugId:0

-----  
revision 1.7

date: 2004/01/13 21:54:07; author: harshad; state: Exp; lines: +13 -1

Major re-working taking into consideration the new target types that we need to add in future -- bwc, oma emn, device specific OTA Prov docs and so on.

BugId:0

-----  
revision 1.6

date: 2003/05/06 00:47:52; author: harshad; state: Exp; lines: +22 -10

branches: 1.6.8;

Introducing Connection Pooling. Major restructuring of classes.

BugId:0  
-----

cvsllog

revision 1.5  
date: 2003/04/18 18:19:30; author: harshad; state: Exp; lines: +35 -11  
BugId:8910  
-----  
revision 1.4  
date: 2003/03/27 02:18:13; author: harshad; state: Exp; lines: +4 -1  
BugId:0  
-----  
revision 1.3  
date: 2003/03/24 18:16:47; author: harshad; state: Exp; lines: +7 -3  
BugId:0  
-----  
revision 1.2  
date: 2003/03/18 18:23:39; author: harshad; state: Exp; lines: +3 -4  
branches: 1.2.2;  
BugId:0  
-----  
revision 1.1  
date: 2003/03/14 23:49:33; author: harshad; state: Exp;  
Initial cut for AlertEngine which will replace SMTP as the preferred  
delivery agent for TMobile. It supports SMPP and PAP.  
BugId:0  
-----  
revision 1.2.2.3  
date: 2003/04/18 18:26:39; author: harshad; state: Exp; lines: +35 -11  
BugId:8910  
-----  
revision 1.2.2.2  
date: 2003/03/27 02:18:01; author: harshad; state: Exp; lines: +4 -1  
BugId:0  
-----  
revision 1.2.2.1  
date: 2003/03/24 18:16:36; author: harshad; state: Exp; lines: +7 -3  
BugId:0  
-----  
revision 1.6.8.1  
date: 2004/04/07 23:54:25; author: harshad; state: Exp; lines: +6 -2  
The server socket queue length is now configurable  
BugId:0  
-----  
revision 1.8.2.5  
date: 2004/08/27 23:46:50; author: harshad; state: Exp; lines: +36 -9  
Commenting out use of AlertThreadGroup and falling back to old code where in we kept  
a count of active threads.  
The threadgroup was not getting the correct count, the active count was always much  
higher.  
BugId:SDR34822  
-----  
revision 1.8.2.4  
date: 2004/08/25 23:06:00; author: harshad; state: Exp; lines: +20 -4  
BugId:SDR34822  
-----  
revision 1.8.2.3  
date: 2004/08/03 22:11:41; author: harshad; state: Exp; lines: +11 -30  
Adding AlertEngineThreadGroup to keep count of active threads and to find if there  
are any uncaught exceptions.  
BugId:SDR32325  
-----  
revision 1.8.2.2  
date: 2004/04/21 00:17:55; author: harshad; state: Exp; lines: +1 -10  
Removing references to bwc, I had checked in the code before the apr04 branch was  
cut.  
BugId:0



cvslog

-----  
revision 1.8.2.1

date: 2004/04/08 00:03:30; author: harshad; state: Exp; lines: +6 -2

server socket queue length is now configurable from property file

BugId:0  
=====

Fwd Re RE Sendmail Tuning

----- Forwarded Message -----

> From: Harshad Kamat <harshad@TeamOn.com>  
> To: Harshad Kamat <harshad@TeamOn.com>; Steve McCarthy  
> <sjm@teamon.com>; Shaibal Roy <sroy@rim.net>; Michael Zakharoff  
> <zak@TeamOn.com>  
> Cc: Aaron Roberts <aaron@teamon.com>; Chris Lira <chris@teamon.com>;  
> David Hanson <davidh@teamon.com>  
> Subject: Re: RE: Sendmail Tuning  
> Date: Thu, 27 Mar 2003 10:43:28 -0800 (PST)

> Another observation.

> If the SMSC is down and is not responding, the Alert Engine sends a  
> "554 Transaction failed" to Sendmail and Sendmail promptly bounces the  
> mail to error-handler, it does not queue it.

> Since it is LMTP, maybe it does not queue it and bounces it  
> immediately. If this is the case, we will have to return a 421 instead  
> of 554 so that it puts it in the queue.

> -  
> Harshad N Kamat  
> TeamOn Systems  
> 425-369-5751

> ----- Original Message -----

> > From: Harshad Kamat <harshad@TeamOn.com>  
> > To: Michael Zakharoff <zak@TeamOn.com>; Shaibal Roy <sroy@rim.net>;  
> > Steve McCarthy  
> > <sjm@teamon.com>  
> > Cc: Aaron Roberts <aaron@teamon.com>; Chris Lira <chris@teamon.com>;  
> > David Hanson <davidh@teamon.com>  
> > Subject: Re: RE: Sendmail Tuning  
> > Date: Thu, 27 Mar 2003 10:36:40 -0800 (PST)

> > I have to run a test with TMobile at 2 pm where I will be sending a  
> > total of 21K alerts to 300 msisdns.

> > I just ran a smaller version of that where I sent 3K mails to 300 msisdns.  
> > The observations are as follows.

> > 1) Sendmail opened 371 connections to the AlertEngine to deliver 371  
> > alerts which resulted in 371 new connections being opened and  
> > subsequently closed to the SMSC. It got a busy signal for the  
> > remaining 2629 attempts and queued up the mails.

> > 2) I ran sendmail -q -v to clear up the queue and it sent all these  
> > 2629 mails over a single connection.

> > I am sure TMobile will not like the behavior described in 1) above.  
> > Hence, I don't want to run this configuration in production. There  
> > are two solutions.

> > 1) Either we configure sendmail to queue all the mails and run the  
> > queue every 10 seconds or so.

> > 2) I am going to introduce a connection pool for the SMSC connections.

> > -  
> > Harshad N Kamat  
> > TeamOn Systems  
> > 425-369-5751

> > ----- Original Message -----

```
> > > From: Shaibal Roy <sroy@rim.net>
> > > To: Michael Zakharoff <zak@TeamOn.com>
> > > Cc: Harshad Kamat <harshad@TeamOn.com>; Steve McCarthy
> > > <sjm@TeamOn.com>
> > > Subject: RE: Sendmail Tuning
> > > Date: Thu, 27 Mar 2003 13:18:29 -0500
> > >
> > >
> > > Good info. Thanks, Harshad.
> > >
> > > Mike:
> > >
> > > Some observations:
> > >
> > > 1) "If the ForkEachJob option is set, sendmail cannot use connection caching".
> Out
> >
> > > config does not set this, right?
> > >
> > > 2) Should we consider running in "queue only" mode with a low queue interval?
> > >
> > > 3) What shall we set ConnectionCacheSize to? 4?
> > >
> > > Thanks.
> > >
> > > -shaibal
> > >
> > > -----Original Message-----
> > > From: Harshad Kamat [mailto:harshad@TeamOn.com]
> > > Sent: Thursday, March 27, 2003 10:04 AM
> > > To: Michael Zakharoff; Shaibal Roy; Steve McCarthy
> > > Subject: Sendmail Tuning
> > >
> > >
> > > http://www.sendmail.org/~ca/email/doc8.12/op-sh-4.html
> > >
> > > Harshad N Kamat
> > > TeamOn Systems
> > > 425-369-5751
> > >
> > >
>
>
```



Version 0.3

**Instructions:**

- Fill in all sections of this form.
- SAVE A LOCAL COPY.
- Attach your local copy of this form to an email and send to **patents@rim.net**.

**Tracking Information:**

Unique ID: TBD  
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Version 0.3

**Contact Information:**

**Your Information:**

**Name:** Harshad N Kamat  
**Email Address:** hkamat@rim.net  
**Phone ext.:** (425)3695751  
**RIM Location:** RIM U.S. -- TeamOn Systems

**Your Supervisor's Information:**

**Name:** Steve McCarthy  
**Email Address:** smccarthy@rim.net

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## ***Invention Disclosure Form: ID-TBD***

Version 0.3

**Short Title:** [Enter Short Title Here]

### **Question 1**

**Who are the people whom you would consider to be inventors for this invention? Please list their names and email addresses, and include yourself if you believe you are an inventor:**

Harshad Kamat  
Shaibal Roy

hkamat@rim.net  
sroy@rim.net

### **Question 2**

**What do you call your invention (long title)?**

Universal Alert Engine

### **Question 3**

**Which of the following technical fields are relevant to your invention? Please check all that apply.**

#### *Software*

- ☒ Applications
- ☐ Device Software
- ☐ Device Firmware (incl. DSP)
- ☐ OS
- ☒ Host Software (BES, MDS)
- ☐ Web Client/ Internet Edition
- ☐ Relay/Network
- ☐ Java
- ☐ Security
- ☐ Protocol Stack (incl. TTPCOM & 3G)
- ☐ UI
- ☐ Phone
- ☐ POS
- ☐ Modem
- ☐ Sync

#### *Hardware*

- ☐ Power
- ☐ Antenna
- ☐ RF
- ☐ ASIC
- ☐ LCD
- ☐ Keyboard
- ☐ Speaker/Microphone
- ☐ Thumbwheel
- ☐ Cradle (device to desktop link)
- ☐ Holster/Accessories

#### *Standards*

- ☐ 3G
- ☐ CDMA
- ☐ IDEN
- ☐ EDGE
- ☐ GPRS
- ☐ GSM
- ☐ UMTS
- ☐ Mobitex/DataTAC

**Provide further details if needed:**  
[Answer here]

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Version 0.3

## Question 4

**What problem(s) does this invention address? Describe in detail.**

In a system where a user wants to be notified of an event by means of an alert, the alert delivery engine needs to know the user's preferred alert mechanism. In order to deliver an alert to the user in his preferred medium, like e-mail, sms, wap etc., the alert delivery engine needs to have access to the user profiles.

## Question 5

**How does the invention solve the problem(s) identified in question 4? Describe in detail.**

The invention solves the problem by accepting the alert content in a generic format, like e-mail, and then delivers the alert to the intended user in his preferred medium, like e-mail, sms, or wap, based on certain properties of the alert content.

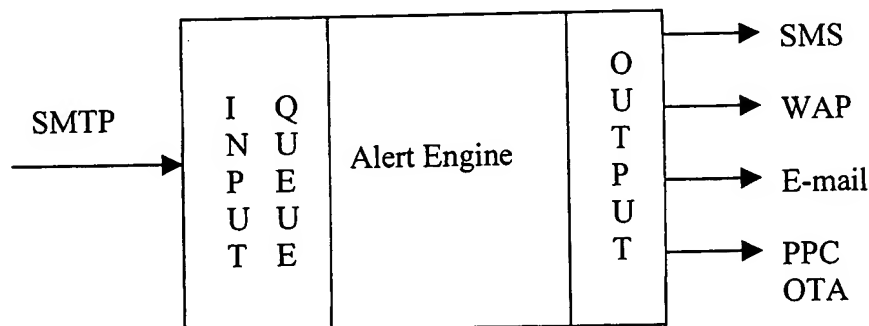
## Question 6

**If your invention can be described as:**

a) a software or process and related steps; please provide a flowchart and/or a logic diagram and corresponding written description clearly explaining the steps or sequences that comprise your invention;

and/or

b) an apparatus or system and related structure; please provide a block diagram illustrating the various components of the apparatus/system and corresponding written description clearly explaining the various components and how they interact.



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## ***Invention Disclosure Form: ID-TBD***

Version 0.3

1. Alerts are delivered to the Alert Engine over SMTP.
2. Alert Engine queues up alerts in input queue.
3. The Alert Engine pulls each alert from the queue and transforms it to the target delivery format be it sms, wap push, e-mail, pocket-pc over-the-air provisioning document and likewise based on certain headers and/or the format of the target address.
4. The alert in the destination format is delivered to the appropriate gateway for that format.

**Include details on which part(s) of your block diagram and/or flowchart embody your invention. Your diagrams and description may be provided in separate attached files when submitting this document by email to [patents@rim.net](mailto:patents@rim.net).**

### **Question 7**

**Are you aware of any existing solutions that attempt to address the problem(s) outlined in question 4, if so please list them and provide a brief summary. Please spend a few minutes to search the web using <http://www.google.com/> and provide the two most relevant solutions you find. Note: please paste specific URLs and Keywords!**

<http://www.birlasoft.com/white/wirelesscontentdelivery.pdf>  
<http://otn.oracle.com/products/iaswe/htdocs/datasheet.pdf>

[alert engine sms]  
[alert engine sms]

### **Question 8**

**For each solution listed in question 7, how is your solution different? Please describe in detail. If no existing solutions were found in answer to question 7, please proceed to question 9.**

For the BirlaSoft solution, it is not clear what the input format of the alert is. However, it appears as if the alert is delivered to the distribution engine in the output format desired by the user and the distribution engine performs no transformation.

For the Oracle 9iAS Wireless Solution, the input format to the system can be from a variety of sources, the ones listed are HTTP, Local Files, FTP, and SQL in multiple formats. Also, the alert system seems to have access to the user's personal information and settings based on which it decides the output format for the alert.

### **Question 9**

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## ***Invention Disclosure Form: ID-TBD***

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Version 0.3

Are you aware of any date(s) on which the invention, a product incorporating the invention, or any details relating to the invention may have been or is going to be released outside of RIM? If so, please provide the dates of any such releases.

Disclosed to T-Mobile early '03. Confidentiality Clause in contract

### **Question 10**

Is this submission a result of a "Patent Mining Session?"

☒ YES

☐ NO

### **Question 11**

Are you able to provide any further documents that relate to this invention (i.e. design documents, specifications, drawings, sketches, rough ideas, etc)? If so, please attach the file(s) when submitting this document by email to [patents@rim.net](mailto:patents@rim.net).

[Answer Here]

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